## **CLAIMS**

- SUB
- 1. A telecommunications cabinet assembly comprised of:
- (a) a cabinet framework with a first end and a second end;
- (b) a plurality of DSX-1 jack assemblies mounted on the cabinet framework; and
- (c) at least one multiplexer mounted on the cabinet framework and disposed to be accessed from the first end of the cabinet framework.
- 2. A telecommunications cabinet assembly as recited in claim 1, and further wherein each jack assembly is comprised of:
- (a) a front panel portion which includes a single column of at least one sleeve for receiving a plug therein;
- (b) a switch assembly support portion; and
- from the corresponding sleeve, the switch assembly being adapted to receive and make electrical contact with a plug inserted in the corresponding sleeve.
- 3. A telecommunications cabinet assembly as recited in claim 1, and further wherein the plurality of DSX-1 jack assemblies are each removably secured to the first end of the cabinet framework.

al (out

- 4. A telecommunications cabinet assembly as recited in claim 1, and further wherein the plurality of DSX-1 jack assemblies comprise at least forty-two DSX-1 circuits.
- 5. A telecommunications cabinet assembly as recited in claim 1, and further wherein the at least one multiplexer comprises an M13 multiplexer/demultiplexer.
- 6. A telecommunications cabinet assembly as recited in claim 1, and further comprising a backplane circuit board assembly electrically connected to the at least one multiplexer and the plurality of DSX-1 jack assemblies.
- 7. A telecommunications cabinet assembly as recited in claim 1, and further comprising at least one DSX-3 jack assembly mounted on the cabinet framework.
- 8. A telecommunications cabinet assembly as recited in claim 1, and further wherein the at least one multiplexer is mounted in the same horizontal plane as the plurality of DSX-1 jack assemblies.
- 9. A telecommunications cabinet assembly as recited in claim 1, and further wherein the at least one multiplexer is comprised of one active and one standby multiplexer.

al (nt

- 10. A telecommunications cabinet assembly as recited in claim 1, and further wherein the plurality of multiplexers comprise:
- (a) a high speed transmission line interface unit responsible for signal input-output interface with a set of sending and receiving high speed transmission lines:
- (b) a low speed transmission line interface unit responsible for signal input-output interface with a set of sending and receiving low speed transmission lines; and
- (c) a multiplex converting unit for performing multiplexing and demultiplexing between high speed signals transmitted on the high speed transmission lines and low speed signals transmitted on the low speed transmission lines.
- 11. A telecommunications cabinet assembly as recited in claim 10, and further wherein the interface between the multiplex converting unit and the switch assemblies comprises an optical fiber interface.
- 12. A telecommunications cabinet assembly as recited in claim 1, and further comprising:
- (a) a backplane printed circuit board assembly mounted to the cabinet framework; and
- (b) an interconnect printed circuit board electrically coupling the jack assemblies with the backplane printed circuit board assembly.

Cont

- 13. A telecommunications cabinet assembly as recited in claim 1, and wherein the plurality of jack assemblies are disposed to be accessed from the front end of the cabinet framework.
  - 14. A telecommunications cabinet assembly comprised of:
- (a) a cabinet framework with a first end and a second end, and wherein the framework defines a width dimension to a height dimension ratio which is greater than one;
- (b) a plurality of DSX-1 jack assemblies mounted on the cabinet framework; and
- (c) at least one multiplexer mounted on the cabinet framework.
- 15. A telecommunications cabinet assembly as recited in claim 14, and further wherein the framework defines the width dimension to height dimension ratio at greater than three and less than four.
- 16. A telecommunications cabinet assembly as recited in claim 14, and further wherein the framework defines the width dimension to be in a range from 14 inches to 24 inches.
- 17. A telecommunications cabinet assembly as recited in claim 14, and further wherein the framework defines the height dimension to be in a range from 3 inches to 6 inches.

- 18. A telecommunications cabinet assembly comprised of:
- (a) a cabinet framework with a first end and a second end, the cabinet framework configured to mount to a nineteen inch wide distribution rack;
- (b) at least forty-two DSX-1 jack assemblies mounted on the cabinet framework; and
- (c) at least two multiplexers mounted on the cabinet framework, the at least two multiplexers being electrically connected to the at least forty-two DSX-1 jack assemblies.
- 19. A telecommunications cabinet assembly as recited in claim 18, and further comprised of a backplane circuit board assembly electrically connected to the at least one multiplexer and the at least forty-two DSX-1 circuits.

- 20. A telecommunications cabinet assembly comprised of:
- (a) a cabinet framework with a first end and a second end;
- (b) a plurality of DSX-1 jack assemblies mounted on the cabinet framework, each jack assembly being comprised of:
  - (i) a front panel portion which includes a single column of at least one sleeve for receiving a plug therein;
  - (ii) a switch assembly support portion; and
  - (iii) at least one switch assembly positioned within the framework rearward from the corresponding sleeve, the switch assembly being adapted to receive and make electrical contact with a plug inserted in the corresponding sleeve;
- (c) at least one multiplexer mounted on the cabinet framework;
- (d) a backplane circuit board electrically connected to the at least one multiplexer and the plurality of DSX-1 jack assemblies.
- 21. A telecommunication's cabinet assembly as recited in claim 20, and further wherein the backplane circuit board assembly is electrically connected to the at least one multiplexer and the plurality of DSX-1 jack assemblies by a backplane interconnect conductor.

Court

22. A telecommunications cabinet assembly comprised of a cabinet framework with a first end and a second end, the cabinet framework having a vertical height of less than twelve inches, the cabinet framework including a first set of DSX-1 jack assemblies mounted on and disposed to be accessed from the first end of the cabinet framework, a first multiplexer mounted on and disposed to be accessed from the first end of the cabinet framework, the first multiplexer being electrically connected to the first set of DSX-1 jack assemblies;

and wherein there is at least one multiplexer and at least twenty-eight.

DSX-1 jack assemblies mounted on the cabinet framework.

- 23. A telecommunications cabinet assembly as recited in claim 22, and further wherein the first multiplexer electrically connected to the first set of DSX-1 jack assemblies through a backplane printed circuit board assembly.
- 24. A telecommunications cabinet assembly as recited in claim 22, only wherein there are at least two multiplexers and at least fifty-six DSX-1 circuits mounted on the cabinet framework.
- 25. A telecommunications cabinet assembly as recited in claim 22, only wherein the cabinet framework has a vertical height of less than six inches.



- 26. A telecommunications cabinet assembly as recited in claim 22, only wherein there are at least two multiplexers and at least fifty-six DSX-1 circuits mounted on the cabinet framework.
- 27. A telecommunications cabinet assembly comprised of a cabinet framework with a first end and a second end, the cabinet framework having a vertical height of less than twelve inches, the cabinet framework including a first set of DSX-1 jack assemblies mounted on the cabinet framework, a first multiplexer mounted on the cabinet framework, the first multiplexer being electrically connected to the first set of DSX-1 jack assemblies; and wherein the first multiplexer is mounted on a same horizontal plane within the cabinet as the first set of DSX-1 jack assemblies.
  - 28. A telecommunications cabinet assembly comprised of:
- (a) a cabinet framework with a first end and a second end;
- (b) a plurality of DSX-3 assemblies mounted on the cabinet framework;
- (c) at least one multiplexer mounted on the cabinet framework and electrically connected to the plurality of DSX-3 assemblies.